

FOUR NEW SPECIES OF MIRIDAE FROM TEXAS
(HEMIPTERA).*

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Phytocoris conspicuus n. sp.

This species is readily distinguished from other related species by its conspicuous red markings and male genital claspers.

♀. Length 5.58 mm., width 1.93 mm. Head: width .96 mm., vertex .37 mm., clothed with silvery simple hairs and sericeous pubescence; yellow, frons marked with bright red oblique lines; tylus yellow, apical third bright red, basal two-thirds with irregular red lines; juga and lora more red than yellow. In one dark specimen the head becomes uniformly dark reddish brown, the oblique lines on frons nearly obsolete. Rostrum, length 2.31 mm., reaching upon third ventral segment, yellowish, apical segment brownish to black. Antennae: segment I, length 1.21 mm., red, broad pale band anterior to middle, clothed with many pale yellowish bristles which in length are equal to more than thickness of segment; II, 2.2 mm., reddish brown, with broad pale band at base, a broader pale band anterior to middle but sometimes obscure; III, 1.5 mm., fuscous, pale at base; IV, 1.13 mm., uniformly fuscous. Pronotum: length .92 mm., width at base 1.59 mm.

Dorsum clothed with simple brownish pubescence and intermixed with white sericeous pubescence, the latter more abundant on mesoscutum, base of scutellum, transverse band across middle of hemelytra and a rounded patch near apex of corium. Dorsum yellowish and darkened with fuscous; pronotal disk slightly fuscous, an irregular darker area extending along lateral margins posterior to calli and across posterior margin, interrupted by pale areas near humeral angles and on middle of posterior margin; calli and collar uniformly yellow. Scutellum uniformly yellow, a dusky to fuscous point on each margin near apex; mesoscutum becoming fuscous in dark specimens. Hemelytra yellowish, clavus, inner margin of corium and obscure transverse band near apex fuscous, base of cuneus reddish yellow, apex with red extending along both margins nearly to base. In darker specimens the apex becomes reddish brown and the base yellow.

* Contribution from the Zoology and Entomology Department, Iowa State College, Ames, Iowa.

lowish brown. Membrane dark fuscous, conspurcate with irregular white spots, a white angular spot on margin at apex of cuneus and a second somewhat smaller one about middle of lateral margin; veins fuscous, pale around apices of areoles. Ventral surface uniformly yellow; legs yellow, apical half of femora red, marked with irregular yellow spots; tibiae pale, annulate with broad unequal red bands; tarsi pale, base and apex fuscous. In darker specimens the red on the legs becomes reddish brown.

♂. Length 5.46 mm., width 1.76 mm. Head: width .96 mm., vertex .33 mm. Rostrum, length 2.18 mm., reaching upon the fourth ventral segment, reddish brown, apical segment black. Antennae: segment I, length 1.15 mm., color and pubescence as in female; II, 2.12 mm., pale brownish, pale bands, as in female, obscure; III, 1.38 mm., fuscous, pale at base; IV, 1.09 mm., uniformly fuscous. Pronotum: length .84 mm., width at base 1.55 mm., coloration and pubescence similar to female; pronotal disk fuscous, collar, calli, line along middle and irregular line on posterior margin pale. Genital claspers distinctive as shown by drawing. (Fig. 1.)

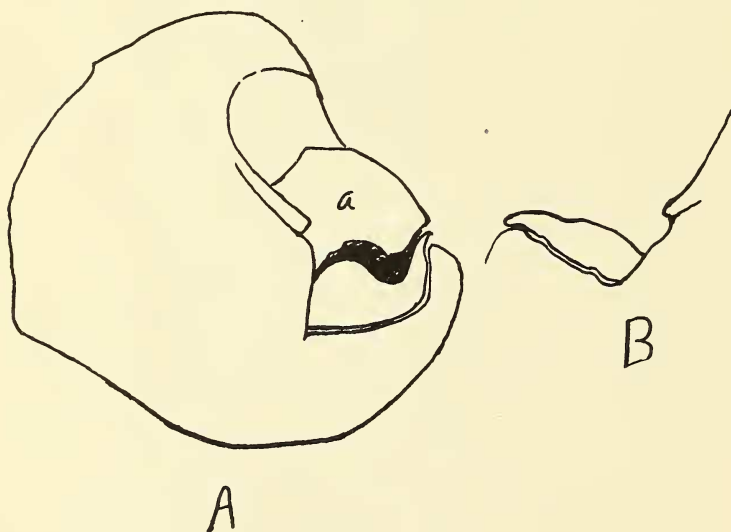


Fig. 1. *Phytocoris conspicuus* n. sp. A, left postero-lateral view of genital segment showing left clasper and flattened tubercle *a*; B, right postero-lateral view showing right clasper and outline of inner margin of genital segment.

Holotype: ♀, October 12, 1928, College Station, Texas (S. E. Jones); author's collection.

Allotype: ♂, October 6, 1928, College Station, Texas (S. E. Jones).

Paratypes: 2 ♀, October 5, 2 ♀ October 6, October 12, 1928, topotypic (S. E. Jones). All the specimens were taken at a light trap. ♂, 5 ♀, "Colo." (C. F. Baker); U. S. National Museum collection.

Three of the paratypes are in Dr. H. H. Knight's collection, five of them in U. S. N. M. collection and the others in the author's collection.

***Eustictus knighti* n. sp.**

Closely allied to *albocuneatus* Knight, but differs in being larger, having longer membrane, and cuneus and antennal segment I being devoid of long erect hairs.

♂. Length 6.7 mm., width 2.35 mm. Head: width 1.3 mm.; vertex .21 mm., reddish brown; frons black. Rostrum: length .31 mm., reaching slightly beyond posterior margins of hind coxae. Antennae: segment I, length .96 mm., reddish brown, marked with pale, irregular transverse bands, sparsely covered with very short, fine, pale pubescence; II, 2.64 mm., densely covered with very short, fine, pale pubescence, the pale markings as in I, but somewhat obscure except in dark colored specimens; III, 1.38 mm., markings and pubescence as in II; IV, 1.13 mm., reddish brown, pubescence less dense than on other segments. Pronotum: length 1.21 mm., width at base 2.05 mm., black, the basal third often dark reddish brown, very narrow white line extending across basal margin.

Dorsum with many rather uniformly spaced, long, erect hairs on pronotum, scutellum, and hemelytra excepting cuneus and embolium. Ground color reddish yellow to brownish, head, except vertex, pronotum, scutellum, and inner apical area of corium, dark brownish to black, apical fourth of embolium reddish brown, its extreme edge black, basal half of cuneus opaque white, apex dark brown. Legs red, apex of femora and tibiae dark reddish brown. Venter uniformly red except genital segment which is reddish brown. Hind tibiae covered with very long erect hairs, also a few long erect hairs on apex of hind femora.

♀. Length 7.1 mm., width 2.6 mm. Head: width 1.26 mm., vertex .42 mm. Antennae: segment I, length 1.13 mm.; II, 2.89 mm.; III, 1.51 mm.; IV, 1.13 mm. Pronotum: length

1.34 mm., width at base 2.26 mm. Slightly larger but otherwise very similar to the male.

Holotype: ♂, May 9, 1929, College Station, Texas (H. G. Johnston); author's collection.

Allotype: ♀, May 22, 1930, College Station, Texas (H. G. Johnston).

Paratypes: 10 ♂♀, taken with the holotype. 3 ♂, taken with allotype. ♀, October 6; ♂, October 7; ♂, October 21, 1928, topotypic (S. E. Jones). ♂, May 16, 1929; 2 ♂, May 7, 1930, topotypic (H. G. Johnston). All the specimens were taken at light traps. ♀, Texas (Belfrage); U. S. N. M. collection.

This beautiful species is named in honor of Dr. H. H. Knight, who has so willingly given his time to make possible the correct determination of the author's collection of Miridae.

Labopidea geminata n. sp.

Allied to *planifrons* Knight, but readily distinguished by longer antennal segments II and III, narrower vertex, longer and more erect pubescence, and in the pale yellowish green color; male genitalia distinctive.

♂. Length 3.9 mm., width 1.17 mm. Head: width .79 mm., vertex .44 mm.; vertex and frons distinctly elevated, not as flat as in *planifrons*. Rostrum, length .71 mm., reaching well beyond the hind margins of front coxae. Antennae: segment I, length .31 mm.; II, 1.13 mm.; III, 1 mm.; IV, .42 mm., very slender; segments I and II uniformly pale yellowish, covered with conspicuous, brownish hairs, segments III and IV uniformly brown. Pronotum: length .37 mm., width at base .92 mm.; disk distinctly elevated.

Color pale yellowish green, head, pronotum, scutellum and venter paler; membrane uniformly dusky brown. Clothed with simple erect pubescence which is longer and coarser than in *planifrons*. Male claspers distinctive, similar to those of *planifrons*, but the lower margin of left clasper forming a rather broadly curved hook (not tightly compressed as in *planifrons*), the extreme tip reaching back to a point almost opposite the middle of clasper; right clasper more slender than in *planifrons*, the distal margin forming an acuminate spine which curves downward. Aedeagus very short, scarcely extending beyond posterior margin of left clasper.

♀ (Macropterous). Length 3.52 mm., width 1.33 mm. Head: width .79 mm., vertex .48 mm. Rostrum, length .71

mm., reaching beyond posterior margins of front coxae. Antennae: segment I, length .29 mm.; II, .92 mm.; III, .79 mm.; IV, .42 mm. Pronotum: length .37 mm., width at base .96 mm. Shorter and broader than male but otherwise very similar.

♀ (Brachypterous). Length 3.15 mm., width 1.34 mm. Head: width .84 mm., vertex .52 mm. Rostrum, length .79 mm. Antennae: segment I, length .29 mm.; II, .96 mm.; III, .84 mm.; IV, .42 mm. Pronotum: length .37 mm., width at base .94 mm. Coloration and pubescence as in macropterous form; form somewhat shorter and broader; hemelytra covering a little more than half the abdomen, completely developed excepting membrane which is practically absent, the cuneus round at apex. This form occurs much more abundantly than the macropterous form.

Holotype: ♂, April 4, 1928, Huntsville, Texas (H. G. Johnston); author's collection.

Allotype: ♀, taken with the holotype.

Morphotype: ♀, taken with the holotype.

Paratypes: 31 ♂♀, taken with the types on wild garlic, *Allium canadense*, where the species was breeding in abundance.

This species is another example of geminate species, *geminata* being a southern twin of *planifrons* Knight which is known to occur from Iowa westward to South Dakota.

Lepidopsallus nyssae n. sp.

Closely allied to *miniatus* Knight but distinguished by pale brownish color and the relative lengths of antennal segments I and II.

♂. Length 3.02 mm., width 1.42 mm. Head: width .75 mm., vertex .31 mm. Rostrum, length 1.05 mm., just attaining posterior margins of middle coxae. Antennae: segment I, length .14 mm.; II, .79 mm.; III, .33 mm.; IV, .23 mm.; uniformly pale yellowish, two apical segments sometimes dusky. Pronotum: length .63 mm., width at base 1.15 mm.

Color pale brown to fuscous, never reddish as in *miniatus*, head, pronotum and scutellum dark fuscous to black, hemelytra pale brownish, sometimes becoming dark brownish, lateral apical half of corium fuscous, cuneus uniformly pale brownish, translucent, membrane fuscous, veins pale. Clothed with silvery scale-like pubescence and intermixed with pale yellowish to fuscous simple pubescence. Legs dark brown, apex of femora, tibiae and tarsi pale; tibial spines

black, arising from brown spots which become obscure apically. Ventral surface uniformly dark brownish.

♀. Length 2.98 mm., width 1.59 mm. Head: width .79 mm., vertex .37 mm. Rostrum, length .96 mm., scarcely attaining posterior margins of middle coxae. Antennae: segment I, length .14 mm.; II, .67 mm.; III, .29 mm.; IV, .22 mm.; uniformly pale yellowish. Pronotum, length .67 mm., width at base 1.26 mm.

Color much paler than in male, dorsum uniformly pale brownish except anterior half of pronotum and head which are fuscous to black. Ventral surface pale brownish, mesosternum and genital segment brown, shining. Legs uniformly pale, bases of fore coxae brown, shining. Pubescence as in male.

Holotype: ♂, May 12, 1928, College Station, Texas (H. G. Johnston); author's collection.

Allotype: ♀, taken with the holotype.

Paratypes: 52 ♂♀, taken with the types on black gum, *Nyssa sylvatica*, where the species was breeding.

The writer has taken a large series of *Lepidopsallus miniatus* Knight at College Station, Texas, where the species breeds on post oak, *Quercus stellata*. *L. nyssae* n. sp., although closely related, is readily separated from *miniatus* Knight, the distinguishing characteristics being very constant.

Note on *Eurymus eurytheme autumnalis*.—In Comstock's fine book on the Butterflies of California, p. 51, it is stated that *autumnalis* is an early spring form, but is occasionally taken in the fall, "probably as a result of an early cold spell influencing the pupa." However, it occurs quite regularly and commonly in the fall at Boulder, Colorado. This year we are having a very warm fall, and *autumnalis*, in quite characteristic form, is very abundant, but by no means to the exclusion of true *eurytheme*.—T. D. A. COCKERELL, Boulder, Colo.